



# Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress

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## Summary

The Navy's proposed FY2010 budget, submitted in May 2009, originally requested funding for eight new Navy ships. This total included two relatively expensive, high-capability combatant ships (a Virginia-class attack submarine and a DDG-51 class Aegis destroyer) and six relatively inexpensive ships (three Littoral Combat Ships [LCSs], two TAKE-1 auxiliary dry cargo ships, and one Joint High Speed Vessel [JHSV]). The Navy in September 2009 reduced the LCS request to two ships, reducing the total requested number of all types of ships to seven, of which five were relatively inexpensive LCSs, TAKE-1s, and JHSVs. The Navy's proposed FY2010 budget also requested procurement funding for certain Navy ships that were procured but not fully funded in prior years, and advance procurement funding for certain other Navy ships to be procured in future years.

The Administration submitted its proposed FY2010 budget as a single-year budget only, without an accompanying Future Years Defense Plan (FYDP) for the period FY2010-FY2015. The Administration also did not submit a 30-year shipbuilding plan for the period FY2010-FY2039, as required by 10 USC 231. Consequently, relatively little budget-submission information was available in 2009 concerning the Administration's plans for Navy ship procurement in fiscal years after FY2010.

December 2009 press reports provided information on a draft version of the FY2011 30-year shipbuilding plan that is to be submitted to Congress in early February 2010, in conjunction with the proposed FY2011 defense budget.

Concerns about the Navy's prospective ability to afford its long-range shipbuilding plan, combined with year-to-year changes in Navy shipbuilding plans and significant cost growth and other problems in building certain new Navy ships, have led to strong concerns among some Members about the status of Navy shipbuilding and the potential future size and capabilities of the fleet.

The explanatory statement for the FY2010 DOD appropriations act (H.R. 3326/P.L. 111-118 of December 19, 2009) funds the procurement of the revised total of seven ships requested by the Navy for FY2010.

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## Introduction and Issue for Congress

The Navy's proposed FY2010 budget, submitted in May 2009, originally requested funding for eight new Navy ships. This total included two relatively expensive, high-capability combatant ships (a Virginia-class attack submarine and a DDG-51 class Aegis destroyer) and six relatively inexpensive ships (three Littoral Combat Ships [LCSs], two TAKF-1 auxiliary dry cargo ships, and one Joint High Speed Vessel [JHSV]). The Navy in September 2009 reduced the LCS request to two ships, reducing the total requested number of all types of ships to seven, of which five were relatively inexpensive LCSs, TAKF-1s, and JHSVs. The Navy's proposed FY2010 budget also requested procurement funding for certain Navy ships that were procured but not fully funded in prior years, and advance procurement funding for certain other Navy ships to be procured in future years.

The Administration submitted its proposed FY2010 budget as a single-year budget only, without an accompanying Future Years Defense Plan (FYDP) for the period FY2010-FY2015. The Administration also did not submit a 30-year shipbuilding plan for the period FY2010-FY2039, as required by 10 USC 231. Consequently, relatively little budget-submission information was available in 2009 concerning the Administration's plans for Navy ship procurement in fiscal years after FY2010.

December 2009 press reports provided information on a draft version of the FY2011 30-year shipbuilding plan that is to be submitted to Congress in early February 2010, in conjunction with the proposed FY2011 defense budget. For additional information, see **Appendix A**.

Concerns about the Navy's prospective ability to afford its long-range shipbuilding plan, combined with year-to-year changes in Navy shipbuilding plans and significant cost growth and other problems in building certain new Navy ships, have led to strong concerns among some Members about the status of Navy shipbuilding and the potential future size and capabilities of the fleet.

The issue for Congress that is discussed in this report is how to respond to the Navy's proposed force structure and shipbuilding plans. Decisions that Congress makes on this issue could significantly affect future U.S. military capabilities, Navy funding requirements, and the Navy shipbuilding industrial base.

## Background

### Proposed 313-Ship Fleet

**Table 1** shows the composition of the Navy's planned 313-ship fleet, which the Navy first presented to Congress in February 2006, and compares the 313-ship plan to previous Navy ship force structure proposals. The planned size and structure of the Navy was likely a matter of review in the 2009 Quadrennial Defense Review (QDR).

In December 2009, it was reported that a draft version of the FY2011 30-year shipbuilding plan that is to be submitted to Congress in early February 2010, in conjunction with the submission of

the proposed FY2011 defense budget, includes a proposed fleet with a changed mix of ships and a revised total of 324 ships. For additional information, see **Appendix A**.

**Table I. Recent Navy Ship Force Structure Proposals**

Ship type	2006 Navy proposal for 313-ship fleet	Early-2005 Navy proposal for fleet of 260-325 ships		2002-2004 Navy proposal for 375-ship Navy <sup>a</sup>	2001 QDR plan for 310-ship Navy
		260-ships	325-ships		
Ballistic missile submarines (SSBNs)	14	14	14	14	14
Cruise missile submarines (SSGNs)	4	4	4	4	2 or 4 <sup>b</sup>
Attack submarines (SSNs)	48	37	41	55	55
Aircraft carriers	11/12 <sup>c</sup>	10	11	12	12
Cruisers, destroyers, frigates	88	67	92	104	116
Littoral Combat Ships (LCSs)	55	63	82	56	0
Amphibious ships	31	17	24	37	36
MPF(F) ships <sup>d</sup>	12 <sup>d</sup>	14 <sup>d</sup>	20 <sup>d</sup>	0 <sup>d</sup>	0 <sup>d</sup>
Combat logistics (resupply) ships	30	24	26	42	34
Dedicated mine warfare ships	0	0	0	26 <sup>e</sup>	16
Other <sup>f</sup>	20	10	11	25	25
<b>Total battle force ships</b>	<b>313/314</b>	<b>260</b>	<b>325</b>	<b>375</b>	<b>310 or 312</b>

**Sources:** U.S. Navy data.

- a. Initial composition. Composition was subsequently modified.
- b. The report on the 2001 QDR did not mention a specific figure for SSGNs. The Administration's proposed FY2001 Department of Defense (DOD) budget requested funding to support the conversion of two available Trident SSBNs into SSGNs, and the retirement of two other Trident SSBNs. Congress, in marking up this request, supported a plan to convert all four available SSBNs into SSGNs.
- c. 11 carriers, and eventually 12 carriers.
- d. Today's 16 Maritime Prepositioning Force (MPF) ships are intended primarily to support Marine Corps operations ashore, rather than Navy combat operations, and thus are not counted as Navy battle force ships. The Navy's planned MPF (Future) ships, however, may be capable of contributing to Navy combat capabilities (for example, by supporting Navy aircraft operations). For this reason, MPF(F) ships are counted here as battle force ships.
- e. The figure of 26 dedicated mine warfare ships includes 10 ships maintained in a reduced mobilization status called Mobilization Category B. Ships in this status are not readily deployable and thus do not count as battle force ships. The 375-ship proposal thus implied transferring these 10 ships to a higher readiness status.
- f. Includes, among other things, command ships and support ships.

## FY2010 Shipbuilding Request

The Navy's proposed FY2010 budget, submitted in May 2009, originally requested funding for eight new-construction Navy ships. In September 2009, the requested number of ships was reduced to seven ships due to a one-ship decrease in the number of LCSs requested. The Navy's proposed FY2010 budget also requested procurement funding for certain Navy ships that were procured but not fully funded in prior years, and advance procurement funding for certain other Navy ships to be procured in future years. **Table 2** compares the new-construction ships projected for FY2010 in the FY2009 budget to the new-construction ships actually requested in the FY2010 budget submitted in May 2009.

**Table 2. New-Construction Navy Ships Proposed for Procurement in FY2010**

Ship type	FY2010 column as projected in FY2009 budget	FY2010 column as actually requested in FY2010 budget	Change in FY2010 column from FY2009 budget to FY2010 budget
Ford (CVN-78) class aircraft carrier	0	0	NC
Virginia (SSN-774) class attack submarine	1	1	NC
Zumwalt (DDG-1000) class destroyer	1	0	-1
Arleigh Burke (DDG-51) class destroyer	0	1	+1
Littoral Combat Ship (LCS)	3	3	NC
San Antonio (LPD-17) class amphibious ship	0	0	NC
MPF-A (large-deck aviation ship for Maritime Prepositioning Force (Future), or MPF[F], squadron)	1	0	-1
Lewis and Clark (TAKE-1) class dry cargo ship for MPF(F) squadron	0	2	+2
Mobile Landing Platform (MLP) ship for MPF(F) squadron	1	0	-1
Joint High Speed Vessel (JHSV)	1	1	NC
<b>TOTAL</b>	<b>8</b>	<b>8</b>	<b>NC</b>

**Source:** Prepared by CRS based on U.S. Navy data.

**Note:** In September 2009, the Navy reduced the LCS request to two ships, which reduced the total number of ships requested to seven.

Observations that could be made about the original (May 2010) FY2010 shipbuilding request included the following:

- The eight new ships originally requested for FY2010 include two relatively expensive, high-capability combatant ships (a Virginia-class attack submarine and a DDG-51 class Aegis destroyer) and six relatively inexpensive ships (three Littoral Combat Ships [LCSs], two TAKE-1 auxiliary dry cargo ships, and one Joint High Speed Vessel [JHSV]).

- Although **Table 2** shows no change in the CVN-78 line, the Secretary of Defense announced on April 6, 2009, that aircraft carriers in coming years would be procured at five-year intervals (as opposed to the previous combination of four- and five-year intervals). This proposal, if implemented, would defer procurement of the aircraft carrier known as CVN-79 by one year, from FY2012 to FY2013. The FY2010 budget request includes procurement funding to help complete the procurement cost of CVN-78, which was procured in FY2008, and advance procurement funding for CVN-79.<sup>1</sup>
- Under a multi-year procurement (MYP) arrangement approved for the Virginia-class program, a total of eight Virginia-class boats are to be procured in FY2009-FY2013, in annual quantities of 1, 1, 2, 2, and 2. The Virginia-class boat to be procured in FY2010 is the second of the eight boats covered under this MYP arrangement. Consistent with this MYP arrangement, the FY2010 budget requested advance procurement funding to support the procurement of two Virginia-class boats in FY2011.<sup>2</sup>
- The deletion of the DDG-1000 destroyer and the addition of the DDG-51 destroyer reflected the Administration's proposal to end DDG-1000 procurement with the third DDG-1000 (which was authorized in FY2009), and restart procurement of DDG-51s in FY2010.<sup>3</sup> In addition to requesting funding for the procurement of a DDG-51, the proposed FY2010 budget requested funding to complete the procurement cost of the third DDG-1000, which was authorized but not fully funded in FY2009.
- The Secretary of Defense announced on April 6, 2009, that procurement of an 11<sup>th</sup> LPD-17 and an MLP would be deferred one year, from FY2010 to FY2011. The proposed FY2010 budget requested funding to complete the cost of the 10<sup>th</sup> LPD-17, which was authorized but not fully funded in FY2009, and advance procurement funding for the 11<sup>th</sup> LPD-17.
- The two TAKEs requested for FY2010 are the 13<sup>th</sup> and 14<sup>th</sup> ships in the TAKE program, and are to be the final two ships in the program. The Navy in 2008 stated that it removed these two ships from the FY2009-FY2013 shipbuilding plan pending the completion of a review of requirements for the MPF(F) squadron, and that it was anticipated that these two ships would be re-inserted into the shipbuilding plan following the completion of that review.
- The JHSV shown in **Table 2** is for the Navy. The proposed FY2010 budget also requests funding for the procurement in FY2010 of a second JHSV for the Army. This second JHSV is not shown in the table.

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<sup>1</sup> For further discussion, see CRS Report RS20643, *Navy Ford (CVN-78) Class Aircraft Carrier Program: Background and Issues for Congress*, by Ronald O'Rourke

<sup>2</sup> For further discussion, see CRS Report RL32418, *Navy Attack Submarine Procurement: Background and Issues for Congress*, by Ronald O'Rourke

<sup>3</sup> For further discussion, see CRS Report RL32109, *Navy DDG-51 and DDG-1000 Destroyer Programs: Background and Issues for Congress*, by Ronald O'Rourke

## FY2010-FY2015 Shipbuilding Plan Not Submitted

The Administration submitted its proposed FY2010 budget in May 2009 as a single-year budget only, without an accompanying Future Years Defense Plan (FYDP) for the period FY2010-FY2015.

For reference purposes, **Table 3** shows the Navy's FY2009-FY2013 ship-procurement plan, which was submitted to Congress in February 2008 as part of the FY2009 budget submission.

**Table 3. Navy FY2009-FY2013 Shipbuilding Plan**

(Ships funded in FY2007 and FY2008 shown for reference)

	FY07	FY08	FY09	FY10	FY11	FY12	FY13	Total FY09- FY13
<b>CVN-21</b>		/				/		1
<b>SSN-774</b>	/	/	/	/	2	2	2	8
<b>DDG-1000</b>	2 <sup>a</sup>	0 <sup>a</sup>	/	/	/	/	/	5
<b>CG(X)</b>					/		/	2
<b>LCS</b>	0 <sup>b</sup>	/	2	3	3	4	6	18
<b>LPD-17</b>		/						0
<b>LHA(R)</b>	/							0
<b>TAKE</b>	/	0 <sup>c</sup>	2 <sup>c</sup>					2
<b>JCC(X)</b>						/		1
<b>TATF</b>								0
<b>JHSV<sup>d</sup></b>			/	/	/	/	/	5
<b>MPF(F) TAKE</b>								0
<b>MPF(F) LHA(R)</b>					/			1
<b>MPF(F) LMSR</b>						/		1
<b>MPF(F) MLP</b>					/	/	/	3
<b>Total</b>	5	4 <sup>c</sup>	7	8	8	12	12	47
<b>Subtotal: ships other than LCSs</b>	5	3	5	5	5	8	6	29

**Source:** Navy FY2009 budget submission.

**Key:** **CVN-21** = Ford (CVN-21) class nuclear-powered aircraft carrier. **SSN-774** = Virginia (SSN-774) class nuclear-powered attack submarine. **CG(X)** = CG(X) class cruiser. **DDG-1000** = Zumwalt (DDG-1000) class destroyer. CG(X) = CG(X) class cruiser. **LCS** = Littoral Combat Ship. **LPD-17** = San Antonio (LPD-17) class amphibious ship. **LHA(R)** = LHA(R) class amphibious assault ship. **TAKE** = Lewis and Clark (TAKE-I) class resupply ship. **TAKE-MPF(F)** = Modified TAKE intended for MPF(F) squadron. **MPF(F) LHR(A) (also called MPF(F) Aviation)** = Modified LHA(R) intended for MPF(F) squadron. **LMSR-MPF(F)** = Modified large, medium-speed, roll-on/roll-off (LMSR) sealift ship intended for MPF(F) squadron. **MLP-MPF(F)** = Mobile Landing Platform ship intended for MPF(F) squadron. **TATF** = oceangoing fleet tug. **JCC(X)** = Joint command and control ship. **JHSV** = Joint High-Speed Vessel transport ship.

- a. Two DDG-1000s were procured in FY2007 using split-funding in FY2007 and FY2008.
- b. Although two LCSs were originally funded in FY2007, the Navy canceled these ships as part of its 2007 restructuring of the LCS program.

- c. Although Congress funded the procurement of one TAKE for Navy use in FY2008, the Navy is using much of this funding to complete the cost of the TAKE funded in FY2007. (The Navy is using much of the funding that Congress had provided for the FY2007 TAKE in turn to pay for cost growth on TAKEs procured in earlier years.) The Navy consequently now records zero TAKEs as procured in FY2008 (rather than one), and the total number of ships of all kinds procured in FY2008 as four (rather than five). One of the two TAKEs requested for FY2009 is the same TAKE that Congress originally funded in FY2008.
- d. Ships shown are those being procured for Navy use. Additional JHSVAs are being procured separately for Army use and are not shown in the Navy's shipbuilding plan.

## FY2010 30-Year Shipbuilding Plan Not Submitted

The Administration did not submit a 30-year shipbuilding plan for the period FY2010-FY2039, as required by 10 USC 231. A May 12, 2009, letter from the acting Secretary of the Navy to the chairmen of the House and Senate Armed Services Committees and the Defense subcommittees of the House and Senate Appropriations Committees stated:

Under Title 10 USC [section] 231, the Secretary of Defense is required to submit with the Defense Budget an Annual Long Range [i.e., 30-year] Plan for the Construction of Naval Vessels and certification that both the budget for that fiscal year and the Future Years Defense Program provide the funding required to support the Navy's long-range construction plan. Given [that] the National Security Strategy is due for release this summer, future force structure may be impacted. Therefore, the Navy considers it prudent to defer its Fiscal Year 2010 report and submit its next report concurrent with the President's Fiscal Year 2011 budget.

In addition to the National Security Strategy, the statutory guidelines require the report to reflect the Quadrennial Defense Review (QDR). The latest QDR is on-going in parallel with the National Security Strategy work. Additionally, the Nuclear Posture Review, which has direct bearing on the numbers of strategic ballistic missile submarines, is due for completion incident with submission of the Fiscal Year 2011 budget. These efforts will likely have a substantive impact on the Navy's force structure requirements.

It is important to ensure the Navy's long-range shipbuilding plan reflects the most up-to-date force structure requirements. I believe the plan would better support a stable demand for the shipbuilding industry by minimizing its iterations and ensuring alignment with guidance. The Fiscal Year 2011 report will integrate all of the guidance and provide a more useful and comprehensive shipbuilding plan.<sup>4</sup>

For reference purposes, **Table 4** shows the Navy's 30-year ship-procurement plan for the period FY2009-FY2038, which was submitted in February 2008, as part of the FY2009 budget submission.

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<sup>4</sup> Letter dated May 12, 2009, from B. J. Penn, Acting Secretary of the Navy, to the chairmen of the House and Senate Armed Services Committee and the Defense subcommittees of the House and Senate Appropriations Committees. Letter provided to CRS by Navy Office of Legislative Affairs on May 20, 2009.

**Table 4. Navy FY2009 30-Year Shipbuilding Plan**  
 (including FY2009-FY2013 FYDP)

F Y	Ship type (see key below)											
	C V N	S C S	L C S	S S N	S S G N	S S B N	A W S	C L F	M P (F)	S u p t	T O T A L	
	09	1	2	1				1	1	1	7	
10	1	3	1						2	1	8	
11	2	3	2							1	8	
12	1	1	4	2					2	2	12	
13	2	6	2						1	1	12	
14	1	6	2						2	2	13	
15	2	6	2						1	2	13	
16	1	2	6	2			1				12	
17	2	6	2				1			1	12	
18	2	6	2				1	1		1	13	
19	2	4	2		1					1	10	
20	2		2				2	2		2	10	
21	1	2		2				2			7	
22	2		2		1		1	2		2	10	
23	1		2				1	2		3	9	
24	2		2		1		1	2		2	10	
25	1	3	2		1			2		2	11	
26	3		2		1		2	2			10	
27	3		2		1						6	
28	3		2		1		1				7	
29	1	3	1		1		1	1			9	
30	3		2		1		1			1	8	
31	3		1		1			1			7	
32	3	1	2		1		2	1		1	11	
33	3		1		1			1		1	7	
34	1	3	2	2			1			1	10	
35	3	5	1				1			1	11	
36	3	5	2				1				11	
37	3	5	1								9	
38	1	3	5	2			2				13	

**Source:** Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2009.

**Key:** **FY** = Fiscal Year; **CVN** = aircraft carriers; **SC** = surface combatants (i.e., cruisers and destroyers); **LCS** = Littoral Combat Ships; **SSN** = attack submarines; **SSGN** = cruise missile submarines; **SSBN** = ballistic missile submarines; **AWS** = amphibious warfare ships; **CLF** = combat logistics force (i.e., resupply) ships; **MPF(F)** = Maritime Prepositioning Force (Future) ships; **Supt** = support ships.

A December 2009 press report provided details on a draft version of the FY2011 30-year shipbuilding plan that is to be submitted in early February 2010, in conjunction with the proposed FY2011 defense budget. For additional information, see **Appendix A**.

## Oversight Issues for Congress

### FY2010 30-Year Shipbuilding Plan Not Submitted

One potential oversight issue for Congress in 2009 concerned the Administration's decision to not submit an FY2010 version of a 30-year shipbuilding plan, as required by 10 USC 231. Potential questions to consider included the following: Are the reasons for not submitting an FY2010 version of the 30-year shipbuilding that are cited in the May 12, 2009, letter from the acting Secretary of the Navy (see "Background" section) adequate? Will this set a precedent for future administrations to not submit a 30-year plan during their first year in office? What implications does the absence of a 30-year plan have for Congress's ability to review, assess, and conduct oversight on the Navy's proposed FY2010 shipbuilding budget?

At a May 15, 2009, hearing on Navy shipbuilding programs before the Seapower and Expeditionary Forces subcommittee of the House Armed Services Committee, Representative Gene Taylor, the chairman of the subcommittee, stated the following in his opening statement for the hearing:

In previous years, at this very hearing [i.e., the subcommittee's annual hearing on Navy shipbuilding programs], I have commented that the budget request and the accompanying 30 year shipbuilding plans were unachievable. In fact, I have stated that the long range plan was 'pure fantasy.' It now appears the Navy has learned how to deflect criticism of the shipbuilding plan: don't submit one. Although required by title 10 of the United States Code, all plans for future year's ship procurement are being withheld from the Congress. This obviously makes it very difficult for the Members of this Congress to fulfill their Article I responsibilities to 'provide and maintain a Navy.'

I realize the two witnesses sitting before this committee today did not make that decision, and I will not continue to dwell upon it here. But I state for the public record that the failure of the Department to describe the future shipbuilding plan will not prevent this subcommittee from the due diligence required in recommending to the full committee and the full House a shipbuilding plan which will restore the Navy to an acceptable number of ships and which will preserve the domestic industrial capability for construction of warships.<sup>5</sup>

Representative Todd Akin, the ranking member of the subcommittee, stated the following in his opening statement for the hearing:

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<sup>5</sup> Source: Text of Representative Taylor's opening statement.

Our colleague, Representative [Randy] Forbes, asked Secretary Gates and Admiral Mullen about the lack of a 30-year shipbuilding plan at a hearing earlier this week.<sup>6</sup> Admiral Mullen stated, “...it will come in the [FY]’11 budget. And I would say we can rely reasonably well on the 30-year shipbuilding plan that’s been submitted before.” But I count at least nine ways this budget diverges from the FY09 [30-year] plan:

- Moving the funding of carriers to five year centers, [which] drops the force to 10 carriers in 2039.
- Building [a total of] 3 DDG 1000 destroyers [over several years] instead of 7.
- Building 1 DDG 51 destroyer [in FY2010] instead of zero.
- Not building the next generation cruiser (CG(X)) in FY11.
- Not building a large deck amphib[ious ship] for the Maritime Prepositioning Force in FY10.
- Not building a Mobile Landing Platform ship for the Maritime Prepositioning Force in FY10.
- Not shutting down the LPD-17 production line at 9 ships, but funding the final increment for the 10<sup>th</sup> ship.
- Building 2 T-AKE ships in FY10 instead of zero.
- Investing half a billion dollars in R&D for the replacement of the OHIO Class submarine.

“So, in fact, we cannot rely upon the last shipbuilding plan and evidently we won’t receive a new one.<sup>7</sup>

## Adequacy of Proposed 313-Ship Fleet

Some observers have questioned whether the Navy’s planned 313-ship fleet includes sufficient numbers of certain ships. Areas of concern include planned numbers of amphibious ships and attack submarines. For additional discussion of the issue, see **Appendix B**.

## Adequacy of Shipbuilding Plan for Maintaining 313 Ships

### This Section Based on FY2009 30-Year Shipbuilding Plan

Since the Administration did not submit an FY2010 30-year shipbuilding plan, this section of the report presents, for reference purposes, a discussion based the FY2009 30-year shipbuilding plan.

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<sup>6</sup> This is a reference to a May 13, 2009, hearing before the full House Armed Services Committee on the proposed FY2010 budget for the Department of Defense, for which the witnesses were Robert Gates, the Secretary of Defense, and Admiral Michael Mullen, the Chairman of the Joint Chiefs of Staff.

<sup>7</sup> Source: Text of Representative Akin’s opening statement.

A December 2009 press report provided details on a draft version of the FY2011 30-year shipbuilding plan that is to be submitted in early February 2010, in conjunction with the proposed FY2011 defense budget, and on how well this draft shipbuilding plan would support the achievement and maintenance of a revised fleet goal of 324 ships. For additional information, see **Appendix A**.

## Summary

**Table 5** shows the Navy's projection of future force levels that would result from fully implementing the Navy's FY2009 30-year shipbuilding plan.

As shown in the table, the FY2009 30-year shipbuilding plan, if implemented, would generally be adequate to achieve and maintain a fleet of about 313 ships. Under the FY2009 30-year plan, the Navy was to reach a total of at least 313 ships in FY2019—three years later than under the FY2008 30-year shipbuilding plan. A primary cause of the three-year delay was the FY2009 plan's 13-ship reduction in the total number of ships planned for procurement in FY2009–FY2013. Most of the 13-ship reduction was due to an 11-ship reduction in the number of Littoral Combat Ships (LCSs) planned for FY2009–FY2013, which is a consequence of the Navy's restructuring of the LCS program in 2007.<sup>8</sup>

Although the FY2009 30-year shipbuilding plan would generally be adequate to achieve and maintain a fleet of about 313 ships, it did not include enough ships to fully support certain elements of the 313-ship fleet consistently over the long run—shortfalls would occur in areas such as amphibious lift capability and the number of attack submarines. The Navy's report on the 30-year plan stated: "While in the main this plan achieves the necessary raw numbers of ships and sustains the shipbuilding industrial base, there are certain time periods where the ship mix, and therefore inherent capability of the force, varies from that required as a result of funding constraints and the timing of legacy fleet service life limits."<sup>9</sup>

The FY2009 30-year plan included new assumptions about extended service lives for amphibious ships and destroyers. If these longer service lives are not achieved, it could increase the shortfall in amphibious lift capability and create a shortfall in the number of cruisers and destroyers.

**Table 5. Navy Projection of Future Force Levels Under FY2009 30-Year Plan**  
(resulting from implementation of 30-year shipbuilding plan shown in **Table 4**)

F Y	Ship type (see key below)												
	C V N	S C S	L C S	S S G	S S B	S W N	A L S	C I F	M P W	M F (F)	S u p	T O T A L	
<b>09</b>	11	109	2	53	4	14	31	31	14	0	17	<b>286</b>	
<b>10</b>	11	111	2	52	4	14	32	30	14	0	17	<b>287</b>	

<sup>8</sup> For more on the LCS program, see CRS Report RL33741, *Navy Littoral Combat Ship (LCS) Program: Background, Issues, and Options for Congress*, by Ronald O'Rourke.

<sup>9</sup> U.S. Navy, *Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2009*, p. 5.

F Y	Ship type (see key below)											
	C V N	S C	L C S	S S N	S S G N	S S B N	A W S	C L F	M I W	M P F (F)	S u p t	T O T A L
11	11	113	2	52	4	14	34	28	14	0	17	289
12	11	110	3	53	4	14	34	29	14	0	18	290
13	10	107	8	54	4	14	33	29	14	1	19	293
14	10	99	11	51	4	14	33	30	14	1	20	287
15	11	94	14	51	4	14	33	30	14	2	21	288
16	11	92	18	49	4	14	33	30	14	4	22	291
17	11	92	24	50	4	14	33	30	13	6	24	301
18	11	93	30	49	4	14	32	30	13	7	26	309
19	12	93	36	50	4	14	32	30	11	9	24	315
20	12	94	42	48	4	14	32	30	10	9	24	319
21	12	95	48	48	4	14	32	30	7	9	24	323
22	12	94	54	47	4	14	32	30	6	10	24	327
23	12	94	55	47	4	14	32	30	2	10	24	324
24	12	94	55	46	4	14	32	30	1	10	24	322
25	12	93	55	45	4	14	33	30	0	10	24	320
26	12	91	55	44	2	14	33	30	0	10	24	315
27	12	91	55	43	1	13	33	30	0	10	24	312
28	12	89	55	41	0	13	33	30	0	10	24	307
29	12	91	55	41	0	13	33	30	0	10	24	309
30	12	94	55	42	0	12	33	30	0	10	24	312
31	12	96	55	44	0	12	33	30	0	10	24	316
32	12	99	55	45	0	12	33	30	0	10	24	320
33	12	101	55	47	0	12	33	30	0	10	24	324
34	12	100	55	49	0	12	33	30	0	10	24	325
35	12	98	55	50	0	12	33	30	0	10	24	324
36	12	95	55	52	0	12	33	30	0	10	24	323
37	12	94	55	53	0	12	33	30	0	10	24	323
38	12	94	55	53	0	12	32	30	0	10	24	322

**Source:** Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2009.

**Key:** **FY** = Fiscal Year; **CVN** = aircraft carriers; **SC** = surface combatants (i.e., cruisers and destroyers); **LCS** = Littoral Combat Ships; **SSN** = attack submarines; **SSGN** = cruise missile submarines; **SSBN** = ballistic missile submarines; **AWS** = amphibious warfare ships; **CLF** = combat logistics force (i.e., resupply) ships; **MIW** = mine warfare ships; **MPF(F)** = Maritime Prepositioning Force (Future) ships; **Supt** = support ships.

## Shortfalls Relative to 313-Ship Goals

The FY2009 version of the 30-year shipbuilding plan, like the FY2008 and FY2007 versions, does not include enough ships to fully support all elements of the planned 313-ship force structure over the long run. As shown in **Table 6** below, however, the total projected shortfall in the 30-year plan relative to the 313-ship force structure has been reduced from about 39 ships two years ago to 15 ships today. The reduction in the shortfall from about 39 ships two years ago to about 26 ships one year ago was due primarily to a Navy decision to insert additional destroyers into the final years of the FY2008 plan. The reduction in the shortfall from about 26 ships a year ago to 15 ships today is due primarily to a new assumption incorporated into the FY2009 plan to extend the service lives of the Navy's 62 Arleigh Burke (DDG-51) class Aegis destroyers by five years (from 35 years to 40).

**Table 6. Projected Shortfall Relative to 313-Ship Force Under FY2009 30-Year Plan**

Projected shortfall by ship type, in numbers of ships, under...	FY2007 (FY07-FY36) plan of Feb. 2006	FY2008 (FY08-FY37) plan of Feb. 2007	FY2009 (FY09-FY38) plan of Feb. 2008
<b>Amphibious ships</b>	1	1	0 <sup>a</sup>
<b>Attack submarines (SSNs)</b>	8	8	7
<b>Cruise missile submarines (SSGNs)</b>	4	4	4
<b>Ballistic missile submarines (SSBNs)</b>	0	0	2 <sup>b</sup>
<b>Cruisers and destroyers</b>	~26	~10	0
<b>MPF(F) ships</b>	0	0	2
<b>Total projected shortfall</b>	~39	~26	15

**Source:** CRS analysis of Navy data.

- a. Although the FY2009 30-year shipbuilding plan would support a force of 32 or 33 amphibious ships, as opposed to 31 called for in the 313-ship plan, the 32- or 33-ship force would include nine LPD-17 class ships, as opposed to the 10 called for in the 313-ship plan. The Marine Corps states that fully meeting the requirement for an amphibious force capable of lifting the assault echelons of 2.0 Marine Expeditionary Brigades (MEBs) would require a 33-ship amphibious force that includes 11 LPD-17s.
- b. Although the FY2009 30-year shipbuilding plan includes 12 replacement SSBNs rather than the 14 called for in the 313-ship plan, the Navy has testified that the 12 new SSBNs would be sufficient to perform the missions of today's 14-ship SSBN force because the 12 new ships would be built with life-of-the-ship nuclear fuel cores and consequently would not require mid-life refuelings. The Navy states that the need for today's SSBNs to be taken out of service for some time to receive mid-life refuelings is what drives the need for a 13<sup>th</sup> and 14<sup>th</sup> SSBN.

## Amphibious Ships

Although the FY2009 30-year shipbuilding plan would support a force of 32 or 33 amphibious ships, as opposed to a total of 31 called for in the 313-ship plan, this 32- or 33-ship force would include 9 San Antonio (LPD-17) class amphibious ships, as opposed to the 10 called for in the 313-ship plan.<sup>10</sup> The Navy's report on the FY2009 30-year shipbuilding plan states:

<sup>10</sup> Congress, as part of its action on the FY2008 defense budget, provided \$50 million in advance procurement funding (continued...)

While the mix of the 33 [amphibious] ships reflected in this plan differs slightly from the USMC requirement, it represents acceptable risk considering the amphibious ships planned for decommissioning are not scheduled for dismantling or sinking to permit mobilization at a later date if required. The decommissioning ships are being replaced with newer more capable LPD 17 and LHA 6 class ships. The Navy will maintain the 33-ship requirement for amphibious shipping through the FYDP while these new ships are integrated into the battleforce. Consequently, there will be no amphibious ship capability gaps through at least FY 2019.<sup>11</sup>

The Marine Corps states that lifting the assault echelons of 2.0 Marine Expeditionary Brigades (MEBs)—a requirement that reflects Marine Corps responsibilities under U.S. war plans—would require a 33-ship amphibious force that includes 11 LPD-17s.<sup>12</sup> **Table 7** shows the Marine Corps' calculation of the amount of amphibious lift, relative to the 2.0 MEB lift goal, resulting from the 32- or 33-ship amphibious force that is projected in the Navy's FY2009 30-year shipbuilding plan. The table presents the five different elements of amphibious lift. In the table, a figure of 1.0 in a cell would meet 100% of the 2.0 MEB lift goal for that lift element, a figure of 1.5 would exceed by 50% the 2.0 MEB lift goal for that element, and a figure of 0.75 would meet 75% of the 2.0 MEB lift goal for that element.

As can be seen in the table, the Marine Corps calculates that the projected 32- or 33-ship amphibious force would

- roughly meet the lift goal for VTOL aircraft spaces;
- exceed the lift goal for troops, space for cargo, and spaces for LCAC landing craft; and
- fall short of meeting the lift goal for space for vehicles.

**Table 7. Projected Amount of Amphibious Lift Under FY2009 30-Year Plan**

(Relative to 2.0 MEB lift requirement, Resulting From Amphibious Force Supported By FY2009 Navy 30-Year Shipbuilding Plan)

	2008	2009	2010	2015	2020	2025	2030	2035
<b>Troops</b>	1.46	1.35	1.38	1.45	1.42	1.35	1.49	1.59
<b>Vehicle (sq. ft.)</b>	0.77	0.75	0.80	0.90	0.88	0.93	1.05	1.17
<b>Cargo (cu. ft.)</b>	2.02	1.90	1.92	2.07	2.04	1.95	2.28	2.49
<b>VTOL aircraft</b>	1.02	0.93	0.94	1.07	1.06	0.97	1.18	1.31
<b>LCACs</b>	1.81	1.75	1.79	1.79	1.75	1.77	1.65	1.50

**Source:** U.S. Marine Corps data provided to CRS, March 11, 2008. Calculations are based on 15 operational ships per MEB. A figure of 1.0 in a cell would meet 100% of the 2.0 MEB lift goal for that lift element; a figure of

(...continued)

for a 10<sup>th</sup> LPD-17 to be procured in a fiscal year after FY2008. The FY2009 shipbuilding plan, like the FY2008 shipbuilding plan, does not include a 10<sup>th</sup> LPD-17, and calls for ending LPD-17 procurement with the ninth ship, which was procured in FY2008. A 10<sup>th</sup> LPD-17, at a cost of \$1,700 million, is the number-two item on the Navy's FY2009 Unfunded Requirements List (URL) and the first item presented in the Marine Corps' FY2009 URL.

<sup>11</sup> U.S. Navy, *Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2009*, p. A-3.

<sup>12</sup> The 33-ship force that would fully meet the 2.0 MEB lift requirement includes 11 large-deck amphibious assault ships (LHAs/LHDs), 11 LPD-17s, and 11 LSD-41/49 class amphibious ships.

1.5 would exceed by 50% the goal for that element; and a figure of 0.75 would meet 75% of the goal for that element.

If the Navy cannot extend the service lives of amphibious ships as much as assumed in the FY2009 30-year shipbuilding plan, then the amount of amphibious lift capability in future years could be less than that shown in **Table 7**.

### **Attack Submarines (SSNs)**

Although the 313-ship plan calls for a total of 48 SSNs, the 30-year shipbuilding plan does not include enough SSNs to maintain a force of 48 boats consistently over the long run. The Navy projects that the SSN force will drop below 48 boats in 2022, reach a minimum of 41 boats (14.6% less than the required figure of 48) in FY2028 and FY2029, and remain below 48 boats through 2033. The Navy has completed a study on various options for mitigating the projected SSN shortfall. One of these options is to procure one or more additional SSNs in the period FY2008-FY2011. The issue is discussed in more detail in another CRS report.<sup>13</sup>

### **Converted Trident Submarines (SSGNs)**

Although the 313-ship plan calls for four SSGNs, the FY2009 30-year shipbuilding plan includes no replacements for the four current SSGNs, which the Navy projects will reach retirement age and leave service in FY2026-FY2028. The Navy's report on the 30-year shipbuilding plan states:

Plans for recapitalization [i.e., replacement] of the OHIO class submarines that have been converted to SSGN have been deferred until their warfighting utility can be assessed. Should their replacement be required, it will be necessary to integrate their procurement with other ship and submarine recapitalization efforts planned for the post-FY 2020 period.<sup>14</sup>

### **Ballistic Missile Submarines (SSBNs)**

Although the FY2009 30-year shipbuilding plan includes 12 replacement SSBNs rather than the 14 called for in the 313-ship plan, the Navy has testified that the 12 new SSBNs would be sufficient to perform the missions of today's 14-ship SSBN force because the 12 new ships would be built with life-of-the-ship nuclear fuel cores and consequently would not require mid-life refuelings. The Navy states that the need for today's SSBNs to be taken out of service for some time to receive mid-life refuelings is what drives the need for a 13<sup>th</sup> and 14<sup>th</sup> SSBN.

### **Cruisers and Destroyers**

Although the FY2009 30-year plan assumes a 5-year service life extension for the Navy's 62 DDG-51s, a Navy official was quoted after the FY2009 30-year plan was released as stating that the Navy had not yet officially approved the idea of extending the service lives of those ships.<sup>15</sup> One potential oversight issue for Congress is why the 30-year plan assumed a 5-year service life

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<sup>13</sup> CRS Report RL32418, *Navy Attack Submarine Procurement: Background and Issues for Congress*, by Ronald O'Rourke.

<sup>14</sup> U.S. Navy, *Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2009*, p. 8.

<sup>15</sup> Zachary M. Peterson, "Destroyer Extension Part of 313-Ship Plan," *NavyTimes.com*, February 11, 2008.

extension for the DDG-51s if the Navy had not yet officially approved the idea. If the Navy approves the idea, a second potential oversight issue for Congress is whether the Navy will actually be able to extend the service lives of the DDG-51s and operate them in a cost-effective manner for 40 years, given the wear and tear that might accrue on the ships in coming years, as well as the DDG-51 design's space, weight, and electrical-power capacities. If a five-year service life extension for the DDG-51s proves infeasible or not cost-effective, a shortfall in cruisers and destroyers similar to that shown in the FY2008 column in **Table 6** might reappear.

### ***MPF(F) Ships***

The projected two-ship shortfall in MPF(F) ships is due to a decision to drop two Lewis and Clark (TAKE-1) class dry cargo ships from the shipbuilding plan. These two ships were previously planned for procurement in FY2010 and FY2011. Navy officials have stated the two ships were removed from the plan pending the completion of a study on the MPF(F) concept of operations, and that the two ships might be put back into the shipbuilding plan next year, following the completion of this study.<sup>16</sup>

### ***Aircraft Carriers***

As mentioned earlier, the Navy projects that the carrier force will drop from the current figure of 11 ships to 10 ships for a 33-month period between the scheduled retirement of the carrier Enterprise (CVN-65) in November 2012 and scheduled the entry into service of its replacement, the carrier Gerald R. Ford (CVN-78), in September 2015. The Navy projects that the force will increase to 12 carriers starting in FY2019, when CVN-79 is commissioned.

10 USC §5062 requires the Navy to maintain an aircraft carrier force of at least 11 operational ships. As it did for FY2008, the Navy for FY2009 requested a legislative waiver from Congress that would permit the Navy to reduce the carrier force to 10 operational ships for the 33-month between the retirement of the Enterprise and the entry into service of the Ford. The issue is discussed further in another CRS report.<sup>17</sup>

## **Affordability of Shipbuilding Plan**

### **This Section Based on FY2009 30-Year Shipbuilding Plan**

Since the Administration did not submit an FY2010 30-year shipbuilding plan, this section of the report presents, for reference purposes, a discussion of the FY2009 30-year shipbuilding plan.

A December 2009 press report provided details on a draft version of the FY2011 30-year shipbuilding plan that is to be submitted in early February 2010, in conjunction with the proposed FY2011 defense budget. The draft plan included discussion of the affordability of the plan, particularly if the shipbuilding budget is not increased to fund the procurement of an envisioned

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<sup>16</sup> See, for example, U.S. Navy, *Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2009*, p. 9.

<sup>17</sup> CRS Report RS20643, *Navy Ford (CVN-78) Class Aircraft Carrier Program: Background and Issues for Congress*, by Ronald O'Rourke.

force of 12 next-generation ballistic missile submarines (SSBNs). For additional information, see **Appendix A**.

## Overview

One of the most significant features in the FY2009 30-year shipbuilding plan, compared to the FY2008 30-year plan, was an apparent increase of roughly 44% in real (inflation-adjusted) terms in the Navy's estimated average annual cost to implement the 30-year plan. This roughly 44% real increase was not due to significant changes in the composition of the 30-year plan, because the types and quantities of ships to be procured under FY2009 30-year plan were generally the same as those in the FY2008 30-year plan.<sup>18</sup>

In 2007, the Congressional Budget Office (CBO) estimated that last year's version of the 30-year plan would cost roughly 35% more per year to implement than the Navy was estimating. The Navy in 2007 downplayed CBO's higher cost estimate, referring to it in testimony as "worst-case analysis"<sup>19</sup> or as an "extremely conservative" estimate.<sup>20</sup> The Navy's revised estimated cost for the FY2009 30-year plan, however, is within about 7% of CBO's estimates for the cost of the plan.

In 2006 and 2007, the Navy had a clearly identifiable strategy for achieving the shipbuilding budget that the Navy then estimated would be needed to implement the 30-year shipbuilding plan. CRS and CBO discussed in reports and testimony in 2006 and 2007 how the Navy's strategy for executing the shipbuilding plan depended on a series of five assumptions concerning the future size and composition of the Navy's budget and the costs of future Navy ships. As noted by both CRS and CBO in 2006 and 2007, all five of these assumptions could be viewed as risk items for the plan, because there were grounds for questioning whether each of them would be borne out.

The 2008 increase in the Navy's estimated cost for implementing the 30-year plan was so large that the Navy no longer appears to have a clearly identifiable, announced strategy for generating the funds needed to implement the 30-year plan, at least not without significantly reducing funding for other Navy programs or increasing the Navy's programmed budget in coming years by billions of dollars per year.

## June 2008 CBO Report

A June 2008 CBO report on the Navy's FY2009 30-year shipbuilding plan states that CBO's analysis indicates the following:

—Executing the Navy's most recent 30-year shipbuilding plan would cost an average of about \$27 billion a year (in [FY]2009 dollars), or more than double the \$12.6 billion a year that the Navy has spent, on average, since [FY]2003.... Since CBO testified on this topic on

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<sup>18</sup> The FY2009-FY2038 plan includes 296 ships, or about 1.7% more than the 291 ships in the FY2008-FY2037 plan. The types of ships procured under the two plans are essentially the same, and the total numbers of each type being procured are in most cases similar.

<sup>19</sup> Source: Transcript of spoken testimony of Vice Admiral Paul Sullivan before the Seapower and Expeditionary Forces subcommittee of the House Armed Services Committee on March 20, 2007.

<sup>20</sup> Source: Transcript of spoken testimony of Allison Stiller before the Defense subcommittee of the House Appropriations Committee on April 25, 2007.

March 14, [2008], the Navy provided additional information that led CBO to increase its estimate of the annual cost of the shipbuilding plan from \$25 billion to \$27 billion.

—After releasing its [report on the FY2009 30-year shipbuilding plan], the Navy discovered a calculation error that caused the costs initially reported in the [FY]2009 plan to be about 10 percent higher than the Navy now expects them to be. After correcting for that error, the Navy’s estimate of the costs of implementing its 30-year shipbuilding plan is about 10 percent less than the estimates that CBO has prepared during the past three years.

—The Navy’s [FY]2009 budget request appears to depart from all of the budgetary assumptions used to develop the service’s [FY]2007 and [FY]2008 shipbuilding plans.

—CBO’s estimates of the costs of the Navy’s shipbuilding program through the period covered by the [FY]2009-[FY]2013 Future Years Defense Program are about 30 percent higher than the Navy’s estimates. In particular, CBO estimates that the DDG-1000 guided-missile destroyer and the CG(X) future cruiser would probably cost significantly more than the Navy currently estimates.

—For the [FY]2009-[FY]2020 period—described as the “near term” in the Navy’s plan—CBO estimates that new-ship construction alone would cost about 13 percent more than the Navy indicates.

—For the period beyond [FY]2020—described as the “far term” in the Navy’s plan—CBO estimates that costs would be about 8 percent greater than the Navy projects.<sup>21</sup>

**Table 8**, which is taken from CBO’s June 2008 report, summarizes Navy and CBO estimates of the cost to implement the 30-year shipbuilding plan.

**Table 8. Average Annual Shipbuilding Costs Under FY2009 30-Year Plan**  
(from June 2008 CBO report; figures in billions of constant FY2009 dollars)

	New-ship construction		New-ship construction (including SSBNs), plus:	
	Excluding SSBNs	Including SSBNs	Nuclear refuelings	Nuclear refuelings, LCS mission modules, and surface combatant modernization
<b>Actual Navy spending, FY03-FY08</b>	11.1	11.1	12.4	12.6
<b>Average annual cost as estimated by:</b>				
<b>Navy</b>	20.4	23.2 <sup>a</sup>	24.4 <sup>b</sup>	25.2 <sup>b</sup>
<b>CBO</b>	22.4	25.0	26.2	26.9
<b>CBO’s estimate of the cost to fully fund the Navy’s 313-ship fleet<sup>c</sup></b>				

<sup>21</sup> Source: Cover letter to Congressional Budget Office, *Resource Implications of the Navy’s Fiscal Year 2009 Shipbuilding Plan*, Washington, 2008. (June 9, 2008) The cover letter, dated June 9, 2008, is from Peter Orszag, Director, CBO, and is addressed to Representative Gene Taylor, the Chairman of the Seapower and Expeditionary Forces subcommittee of the House Armed Services Committee, with copies to Representative Roscoe Bartlett, the Ranking Member of the subcommittee, and Representatives Ike Skelton and Duncan Hunter, the Chairman and Ranking Member, respectively, of the House Armed Services Committee.

New-ship construction		New-ship construction (including SSBNs), plus:	
Excluding SSBNs	Including SSBNs	Nuclear refuelings	Nuclear refuelings, LCS mission modules, and surface combatant modernization
22.5	25.5	26.7	27.4
<b>Memorandum: Navy's estimate average annual cost in 2006 and 2007</b>			
n.a.	16.1	17.2 <sup>b</sup>	18.0 <sup>b</sup>

**Source:** Table 3 from Congressional Budget Office, Resource Implications of the Navy's Fiscal Year 2009 Shipbuilding Plan, Washington, 2008. (June 9, 2008) p. 14.

- a. The Navy's estimate for new-ship construction plus the Navy's cost target for SSBNs under the FY2007 and FY2008 shipbuilding plans.
- b. The Navy's estimate for new-ship construction and cost target for SSBNs plus CBO's estimates for the additional costs.
- c. CBO's estimates of the costs to buy all of the attack submarines, guided-missile submarines, ballistic missile submarines, logistics ships, and amphibious ships needed to maintain a 313-ship fleet.

## Legislative Activity for FY2010

### FY2010 Defense Authorization Act (H.R. 2647/P.L. 111-84)

#### House

**Section 1032** of H.R. 2647 would require a report on the force structure findings of the 2009 Quadrennial Defense Review (QDR). Regarding this section, House Armed Services Committee's report on H.R. 2647 (H.Rept. 111-166 of June 18, 2009) states:

The committee expects that the analyses submitted [under Section 1032] will include details on all elements of the force structure discussed in the QDR report, and particularly the following:....

(5) A description of the factors that informed decisions regarding the Navy battle force, including: assumptions regarding threat capabilities; the modeling, simulation, and analysis used to determine the number and type of battle force vessels necessary to meet the national defense strategy; the force sizing construct including contingency operations; the analysis used to determine the deployed operations required for the battle force fleet during peacetime; the limitations on meeting combatant commander priorities with the proposed battle force structure, including an analysis of risk of not meeting all priority requirements; and the deployed operations envisioned for the battle force fleet and the geographic areas left uncovered by continuous deployed operations of battle force vessels. (Pages 387 and 389)

The committee's report also states:

#### *Capabilities of the United States Navy*

The committee believes the U.S. Navy fleet should be balanced in both capability of ships and quantity of ships, but that quantity should have priority over spending excessive

resources for marginal increases in capability. The committee supports the re-start of the DDG 51 class and believes that a minimum of two of these vessels should be requested per year. The committee maintains cautious support for the Littoral Combat Ship and believes a minimum of three of these vessels should be requested per year. The committee believes that two Virginia class submarines is the minimum that should be funded annually. The committee believes that the operational availability of aircraft carriers is more important than the total number of aircraft carriers in the inventory; however, the committee is not convinced that a total inventory of fewer than 11 carriers will support the required operational availability. The committee supports the ongoing efforts to develop the next generation cruiser. The committee believes that the next generation cruiser must meet the challenge of emerging ballistic missile technology and that an integrated nuclear power system is required to achieve maximum capability of the vessel. The committee supports the revised Maritime Prepositioning Force (Future) and the capability of the Maritime Landing Platform vessel to resupply logistic support from a sea base. The committee is also supportive of continuing procurement of amphibious assault ships (LHA/LHD) but recommends the construction of a modified LHD variant for increased amphibious capability if such modification can be accomplished with minimal non-recurring costs. Finally, the committee recommends that the Navy consider combining acquisition efforts with the U.S. Coast Guard in procurement of the National Security Cutter vessel for use as a Navy frigate.

#### *U.S. Navy shipbuilding*

The budget request contained \$13.8 billion for the construction of 8 Navy ships and completes funding for the 3<sup>rd</sup> and final Zumwalt class destroyer (DDG 1000) and the 10<sup>th</sup> San Antonio class amphibious transport, dock (LPD 17). The request also contains advance procurement for long-lead material and equipment for seven additional vessels, including two Virginia class submarines, for which full funding is expected in fiscal year 2011. Overall, the committee considers this budget request a positive step in restoring the fleet to a level of at least 313 battle force vessels.

The committee is encouraged that the Department of the Navy has requested funding to complete the last two of the Lewis and Clark dry cargo ammunition ships (T-AKE) and the final LPD 17 ship. The committee notes that the Secretary of Defense has decided to truncate the DDG 1000 program to three ships and restart the Burke class destroyer (DDG 51) program. The committee agrees with this decision and understands the agreement reached between the Department and the prime shipbuilding contractors for construction of the three DDG 1000 ships and the re-start of the first three DDG 51 ships will ensure industrial stability at both of the surface combatant construction shipyards while the Department plans for future surface combatant capability and force structure. (Pages 72-73)

## **Senate**

**Section 114** of the FY2010 defense authorization bill (S. 1390) as reported by the Senate Armed Services Committee (S.Rept. 111-35 of July 2, 2009) would require the Navy to submit a report to the congressional defense committees on a service life extension program (SLEP) for Oliver Hazard Perry (FFG-7) class frigates that is to include, among other things, “a detailed plan of the Navy for achieving a 313-ship fleet as contemplated by the 2006 Quadrennial Defense Review, including a comparison for purposes of that plan of decommissioning Oliver Hazard Perry class frigates as scheduled with extending the service life of such frigates under the service life extension program.”

**Section 1013** of S. 1390 as reported expresses the sense of the Senate on achieving and maintaining the Navy’s planned 313-ship fleet. The text of the provision states:

SEC. 1013. SENSE OF SENATE ON THE MAINTENANCE OF A 313-SHIP NAVY.

(a) Findings- The Senate makes the following findings:

(1) The Department of the Navy has a stated requirement for a 313-ship fleet.

(2) The Navy can better meet this requirement—

(A) by procuring sufficient numbers of new ships; and

(B) by ensuring the sound material condition of existing ships that will enable the Navy to utilize them for their full planned service lives.

(3) When procuring new classes of ships, the Navy must exercise greater caution than it has exhibited to date in proceeding from one stage of the acquisition cycle to the next before a ship program has achieved a level of maturity that significantly lowers the risk of cost growth and schedule slippage.

(4) In retaining existing assets, the Navy can do a much better job of achieving the full planned service lives of ships and extending the service lives of certain ships so as to keep their unique capabilities in the fleet while the Navy takes the time necessary to develop and field next-generation capabilities under a low risk program.

(5) The Navy can undertake certain development approaches that can help the Navy control the total costs of ownership of a ship or class of ships, including emphasizing common hull designs, open architecture combat systems, and other common ship systems in order to achieve efficiency in acquiring and supporting various classes of ships.

(6) The Navy needs to continue its efforts toward achieving an open architecture for existing combat systems, as this will have great benefit in reducing the costs and risks of fielding new classes of ships, and will yield recurring savings from reducing the costs of buying later ships in a program and reducing life cycle support costs for ships and classes of ships.

(7) The Navy can also undertake other measures to acquire new ships and maintain the current fleet with greater efficiency, including—

(A) greater use of fixed-price contracts;

(B) maximizing competition (or the option of competition) throughout the life cycle of its ships;

(C) entering into multiyear contracts when warranted; and

(D) employing an incremental approach to developing new technologies.

(b) Sense of Senate- It is the sense of the Senate that—

(1) the Navy should meet its requirement for a 313-ship fleet;

(2) the Navy should take greater care to achieve the full planned service life of existing ships and reduce the incidence of early ship decommissioning;

(3) the Navy should exercise greater restraint on the acquisition process for ships in order to achieve on-time, on-cost shipbuilding programs; and

(4) Congress should support the Navy when it is acting responsibly to undertake measures that can help the Navy achieve the requirement for a 313-ship fleet and maintain a fleet that is adequate to meet the national security needs of the United States.

## **Conference**

In the conference report (H.Rept. 111-288 of October 7, 2009) on H.R. 2647/P.L. 111-84 of October 28, 2009, Section 124 requires the Navy to submit a report to the congressional defense committees on a service life extension program (SLEP) for Oliver Hazard Perry (FFG-7) class frigates.

Section 1021 expresses the sense of the Congress on the maintenance of a 313-ship Navy.

Section 1052 requires a report on the force structure findings of the 2009 Quadrennial Defense Review (QDR). The House report on H.R. 2647 (H.Rept. 111-166 of June 18, 2009—see discussion above) includes report language stating that this report is to include, among other things, “a description of the factors that informed decisions regarding the Navy battle force.... ”

**Section 124** states:

**SEC. 127. REPORT ON A SERVICE LIFE EXTENSION PROGRAM FOR OLIVER HAZARD PERRY CLASS FRIGATES.**

Not later than 90 days after the date of the enactment of this Act, the Secretary of the Navy shall submit to the congressional defense committees a report setting forth the following:

(1) A detailed analysis of a service life extension program for the Oliver Hazard Perry class frigates, including—

(A) the cost of the program;

(B) a notional schedule for the program; and

(C) the shipyards available to carry out the work under the program.

(2) The strategic plan of the Navy for—

(A) the manner in which the Littoral Combat Ship will fulfill the roles and missions currently performed by the Oliver Hazard Perry class frigates as such frigates are decommissioned; and

(B) the year-by-year planned commissioning of Littoral Combat Ships and planned decommissioning of Oliver Hazard Perry class frigates through the projected service life of the Oliver Hazard Perry class frigates.

(3) An analysis of the necessary procurement rates of Littoral Combat Ships if the extension of the service life of the Oliver Hazard Perry class frigates alleviates capability gaps caused by a delay in the procurement rates of Littoral Combat Ships.

(4) A description of the manner in which the Navy has met the requirements of the United States Southern Command over time, including the assets and vessels the Navy has deployed for military-to-military engagements, UNITAS exercises, and counterdrug operations in

support of the Commander of the United States Southern Command during the five-year period ending on the date of the report.

**Section 1021** states:

SEC. 1021. SENSE OF CONGRESS ON THE MAINTENANCE OF A 313-SHIP NAVY.

(a) FINDINGS.—Congress makes the following findings:

(1) The Department of the Navy has a stated requirement for a 313-ship fleet.

(2) The Navy can better meet this requirement—

(A) by procuring sufficient numbers of new ships; and

(B) by ensuring the sound material condition of existing ships that will enable the Navy to utilize them for their full planned service lives.

(3) When procuring new classes of ships, the Navy must exercise greater caution than it has exhibited to date in proceeding from one stage of the acquisition cycle to the next before a ship program has achieved a level of maturity that significantly lowers the risk of cost growth and schedule slippage.

(4) In retaining existing assets, the Navy can do a much better job of achieving the full planned service lives of ships and extending the service lives of certain ships so as to keep their unique capabilities in the fleet while the Navy takes the time necessary to develop and field next-generation capabilities under a low risk program.

(5) The Navy can undertake certain development approaches that can help the Navy control the total costs of ownership of a ship or class of ships, including emphasizing common hull designs, open architecture combat systems, and other common ship systems in order to achieve efficiency in acquiring and supporting various classes of ships.

(6) The Navy needs to continue its efforts toward achieving an open architecture for existing combat systems, as this will have great benefit in reducing the costs and risks of fielding new classes of ships, and will yield recurring savings from reducing the costs of buying later ships in a program and reducing life cycle support costs for ships and classes of ships.

(7) The Navy can also undertake other measures to acquire new ships and maintain the current fleet with greater efficiency, including—

(A) greater use of fixed-price contracts;

(B) maximizing competition (or the option of competition) throughout the life cycle of its ships;

(C) entering into multi-year contracts when warranted; and

(D) employing an incremental approach to developing new technologies.

(b) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) the Navy should meet its requirement for a 313-ship fleet until such time that modifications to the Navy's ship fleet force structure are warranted, and the Secretary of the

Navy provides Congress with a justification of any proposed modifications, supported by rigorous and sufficient warfighting analysis;

(2) the Navy should take greater care to achieve the full planned service life of existing ships and reduce the incidence of early ship decommissioning;

(3) the Navy should exercise greater restraint on the acquisition process for ships in order to achieve on-time, on-cost shipbuilding programs; and

(4) Congress should support the Navy when it is acting responsibly to undertake measures that can help the Navy achieve the requirement for a 313-ship fleet and maintain a fleet that is adequate to meet the national security needs of the United States.

## **FY2010 DOD Appropriations Act (H.R. 3326/P.L. 111-118)**

### **House**

The House Appropriations Committee, in its report (H.Rept. 111-230 of July 24, 2009) on H.R. 3326, states that:

the Committee is aware that the Department of Defense has consistently failed to provide funding to maintain sufficient production within the Navy's shipbuilding program. As a result, the total fleet of United States vessels has shrunk well below the desired fleet size of 313. In this bill, the Committee's recommendations provide funding for construction of 10 ships for the first time since 1992 in order to maintain a 300 ship fleet. (Page 4)

The report also states:

### **SHIPBUILDING**

The Navy's fiscal year 2010 budget request for shipbuilding is moving closer to the goal of being able to reach and maintain the Navy's stated requirement of 313 ships. The Committee firmly believes that in order to reach a fleet size of 313 ships, a minimum of ten ships per year should be constructed. Over the last ten years, the requested ship quantities have averaged less than seven ships per year. Although still short of the nominal ten ship level, the fiscal year 2010 budget requested funding for eight ships. The last time the Navy built at least nine ships was in 1992 when eleven ships were constructed. While the Committee recognizes that the shipbuilding plan is extremely complex, it is the backbone of the Navy's future and the Navy is strongly encouraged to construct the quantity of ships necessary to maintain the required fleet size. In the interim, the Committee provides funding for two additional ships, as outlined below, to bring the fiscal year 2010 ship count up to the desired level of ten ships. (page 165)

The report also states:

### **LEASING OF FOREIGN BUILT SHIPS**

The Committee remains very concerned with the Navy's practice of entering into extended leases for foreign built ships. Historically, these leases have met the intent of long term capital lease restrictions on an individual basis, but the recurring nature of several of the leases violates the spirit and intent of the 1990 Budget Enforcement Act. The Committee recognizes that the ships leased by the Navy fill an important role that must be continued through the near term and well into the future, but believes that ships that fill these roles can

provide an economic opportunity for the domestic shipbuilding industry. Two years ago, the Committee received a report from the Navy on their practice of leasing foreign built ships and a plan for ending the practice of leasing foreign built ships by 2012. The basic conclusion of the report was that the dependence on foreign built ships would be significantly reduced by the year 2012, principally as a result of shifting requirements and modifications to existing Department of Defense assets. Since the administration is currently undertaking a review of future requirements, the Committee is extremely interested in how that review will affect the Navy's practice of leasing foreign built ships. Therefore, the Committee directs the Secretary of the Navy to update the report submitted in March 2008 regarding the practice of leasing foreign built ships. The report should include the Navy's updated plan for terminating the practice of leasing foreign built ships to supplement the fleet and using only domestic built ships by 2012. Additionally, the report should include the necessary budget and funding plans that may be required to accomplish this. This report should be submitted no later than March 31, 2010. (Page 166)<sup>22</sup>

## **Senate**

The Senate Appropriations Committee, in its report (S.Rept. 111-74 of September 10, 2009) on H.R. 3326, states:

*Common Hull Form.*—The Committee remains concerned about the Navy's ability to maintain an adequate fleet and deliver on its shipbuilding program, and build ships on time and on budget. The Chief of Naval Operations pointed out in testimony before the Committee, common hull forms and repeat build of ships that permit longer production runs will reduce construction costs. The Committee supports efforts that control ship costs and help maintain production schedules.

The Committee understands there has been discussion within the Department of the Navy about using the LPD-17 hull as a common hull option for the LCC(R) joint command ship and the LSD(X) dock landing ship replacement programs. The amphibious LPD-17 class ship is a hull form that is at a mature stage of production and should be strongly considered for this commonality approach. Therefore, the Committee directs the Secretary of the Navy to submit a report to the congressional defense committees no later than March 15, 2010, that describes the benefits of using the LPD hull form as a replacement for these ship classes to include estimated cost savings of procuring these ships under a multi-year procurement authority. (Page 114)

## **Final Version**

In lieu of a conference report, the House Appropriations Committee on December 15, 2009, released an explanatory statement on a final version of H.R. 3326. This version was passed by the House on December 16, 2009, and by the Senate on December 19, 2009, and signed into law on December 19, 2009, as P.L. 111-118. The explanatory statement states on page 1 that it "is an explanation of the effects of Division A [of H.R. 3326], which makes appropriations for the Department of Defense for fiscal year 2010. As provided in Section 8124 of the consolidated bill, this explanatory statement shall have the same effect with respect to the allocation of funds and the implementation of this as if it were a joint explanatory statement of a committee of the conference."

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<sup>22</sup> For additional background information on this issue, see CRS Report RS22454, *DOD Leases of Foreign-Built Ships: Background for Congress*, by Ronald O'Rourke.

The explanatory statement funds the procurement of the seven ships requested by the Navy for FY2010, and states:

#### SHIPBUILDING

The fiscal year 2010 shipbuilding budget request from the Department once again falls short of the quantity often ships nominally required to reach and maintain the required fleet size of 313 ships. Further, the Department's revised acquisition strategy for the Littoral Combat Ship, solidified after the submission of the budget, has reduced the requested number of ships from a quantity of eight to a quantity of seven. In an effort to position the Department to request additional ship quantities in fiscal year 2011, the recommendation includes an additional \$170,000,000 of advance procurement funding for the LHA (Replacement) helicopter assault ship and \$250,000,000 of additional advance procurement funding for the DDG-51 Guided Missile Destroyer program.

#### COMMON HULL FORMS

The Navy has discussed in testimony the use of existing hull forms for the design of future ships in an effort to reduce the cost of these ships. Candidate ships include, but are not limited to the replacement command ship, future dock landing ships, future surface combatant, and hospital ships. Candidate hull forms include, but are not limited to, the LPD-17, TAKT, National Security Cutter, Patrol Coastal and DDG-51 hull forms all currently in use. This initiative continues to have strong support and the Secretary of the Navy is directed to submit a report that outlines the benefits of using an existing hull form for future ship construction. The report should include candidate hull forms, candidate ship classes (including survivability requirements), potential cost savings (including under multiyear procurement authority), and the timeframe of when the decision would be made to use an existing hull form for future designs. This report should be submitted to the congressional defense committees not later than March 15<sup>th</sup>, 2010. (Pages 167-168)

### **Resolution Directing Submission of FY2010 30-Year Shipbuilding Plan (H.Res. 477)**

H.Res. 477, introduced on May 21, 2009, directs the Secretary of Defense to transmit to the House of Representatives the FY2010 30-year shipbuilding plan, as required by section 10 USC 231. On June 19, 2009, the House Armed Services Committee reported favorably on H.Res. 477 with an amendment (H.Rept. 111-167 of June 19, 2009). The text of the resolution as amended and reported states:

#### RESOLUTION

Directing the Secretary of Defense to transmit to the House of Representatives the fiscal year 2010 30-year shipbuilding plan relating to the long-term shipbuilding strategy of the Department of Defense, as required by section 231 of title 10, United States Code.

Resolved, That the Secretary of Defense is directed to transmit to the House of Representatives, not later than September 15, 2009—

(1) the fiscal year 2010 30-year shipbuilding plan relating to the long-term shipbuilding strategy of the Department of Defense, as required by section 231 of title 10, United States Code; and

(2) the certification statement of the Secretary required in the plan that both the budget for this fiscal year and the future-years defense program relating to the construction of naval vessels are at a level that is sufficient for the procurement as described in the 30-year shipbuilding plan.

H.Rept. 111-167 states in part:

Section 231 of title 10, United States Code, requires that the Secretary of Defense submit with the budget request required by section 1105(a) of title 31, United States Code, for each fiscal year, a long-range plan for the construction of naval vessels. The long-range plan must describe the naval force required to meet the current national security strategy or the current Quadrennial Defense Review and must certify that the construction plan and that the budget request for the current year and programmed for future years is sufficient to maintain such a naval force.

The budget request submitted pursuant to section 1105(a) of title 31, United States Code, for fiscal year 2010 did not contain the long-range plan for the construction of naval vessels. On May 21, 2009, the Honorable Randy Forbes of Virginia introduced House Resolution 477, a resolution of inquiry that would direct the Secretary of Defense to transmit, within 14 days of the adoption of the resolution, to the House of Representatives, the long-range construction plan for naval vessels along with all documents, including telephone and electronic mail records, logs and calendars, and records of internal discussions in the possession of the Secretary of Defense, the Secretary of the Navy, and the Director of the Office of Management and Budget relating to the long-range plan for the construction of naval vessels.

Clause 7 of rule XIII of the Rules of the House of Representatives provides for a committee to report on a qualifying resolution of inquiry, such as House Resolution 477, within 14 legislative days or a privileged motion to discharge the committee is in order. House Resolution 477 was referred to the Committee on Armed Services on May 21, 2009.

On June 16, 2009, the Committee on Armed Services took up House Resolution 477 for the purpose of reporting a recommendation to the House. House Resolution 477 was amended to require the Secretary of Defense to submit only the long-range plan for the construction of naval vessels and certification required by section 231 of title 10, United States Code, by September 15, 2009.

Under the rules and precedents of the House, a resolution of inquiry is one of the means by which the House may request information from the head of one of the executive departments. It is a simple resolution making a demand of the head of an executive department to furnish the House of Representatives with specific information in the possession of the executive branch. It is not used to request opinions or to require an investigation on a subject.

## **Legislation on Individual Shipbuilding Programs**

For legislative activity on individual Navy shipbuilding, conversion, and modernization programs, see:

- CRS Report RS20643, *Navy Ford (CVN-78) Class Aircraft Carrier Program: Background and Issues for Congress*, by Ronald O'Rourke;
- CRS Report RL32109, *Navy DDG-51 and DDG-1000 Destroyer Programs: Background and Issues for Congress*, by Ronald O'Rourke;

- CRS Report RL34179, *Navy CG(X) Cruiser Program: Background, Oversight Issues, and Options for Congress*, by Ronald O'Rourke;
- CRS Report RL33741, *Navy Littoral Combat Ship (LCS) Program: Background, Issues, and Options for Congress*, by Ronald O'Rourke;
- CRS Report RS22595, *Navy Aegis Cruiser and Destroyer Modernization: Background and Issues for Congress*, by Ronald O'Rourke;
- CRS Report RL34476, *Navy LPD-17 Amphibious Ship Procurement: Background, Issues, and Options for Congress*, by Ronald O'Rourke; and
- CRS Report RL32418, *Navy Attack Submarine Procurement: Background and Issues for Congress*, by Ronald O'Rourke.

## **Appendix A. December 2009 Press Reports About Draft FY2011 30-Year Shipbuilding Plan**

December 2009 press reports provided information on a reported draft version of the FY2011 30-year shipbuilding plan that is to be submitted in early February 2010, in conjunction with the proposed FY2011 defense budget. This appendix presents those press reports.

A December 3, 2009, press report stated:

The Navy is preparing to tell Congress the \$80 billion cost of building new ballistic missile submarines in the coming years could force big shipbuilding cuts and trigger industry consolidation unless the service receives additional funding for the project, Inside the Pentagon has learned.

The 12 new SSBN(X) subs are considered critical for U.S. national security. They would replace 14 Ohio-class subs that carry nuclear ballistic missiles and are deemed by the Navy the most survivable leg of the U.S. strategic arsenal.

In the previous 30-year shipbuilding plan sent to Congress in February 2008, the Navy did not account for the cost of the SSBN(X) project—an omission the service never fully explained. The Navy is now confronting the grim reality that it cannot afford the new subs without curtailing or giving up other shipbuilding projects, according to Pentagon and naval sources and internal documents reviewed by ITP.

The decision to fund the new subs from within the Navy's anticipated budget marks the "single most significant change" since the previous plan, according to a draft of the new 30-year report due to be released to Congress in two months. The report has not been finalized and remains subject to change.

The plan says it might be helpful if Congress lets the Navy split the cost of each SSBN(X) over multiple years, but argues big cuts are likely unless additional funding is provided.

"Unfortunately," ship cuts in the new plan "will likely cause some consolidation in the U.S. shipbuilding industrial base," according to the document, which also notes the Navy will balance warfighting needs with the limitations of the U.S. economic base. The Navy is seeking to minimize the costly SSBN(X) program's impact on the shipbuilding industrial base and on the overall force structure. But in the years when new subs are bought, the procurement of other ship types will be "dramatically reduced resulting in both force level and industrial impact," the draft warns.

A Pentagon source said the need to buy the new subs poses a "big problem" for the Navy because the project is expected to consume much of the shipbuilding account for years.

Funding SSBN(X) within the Navy's shipbuilding budget will "greatly impact the Navy shipbuilding plan and will likely jeopardize that portion of the shipbuilding industrial base not directly involved in submarine production," the draft plan contends. Northrop Grumman's shipyard in Newport News, VA, and General Dynamics' Electric Boat shipyard in Connecticut build subs for the Navy.

The report notes that plans to limit production of surface combatants to fewer than two ships per year for most of the 14-year period of SSBN(X) procurement will likely hurt shipbuilders. GD's Bath Iron Works shipyard in Maine and Northrop's Ingalls shipyard in

Mississippi build surface combatants. Ingalls also builds amphibious ships. Bath is also part of GD's effort to win the Littoral Combat Ship competition. Lockheed Martin leads the other LCS team.

The Ohio-class subs are due to start retiring in fiscal year 2027. SSBN(X) procurement must get under way by FY-19 to ensure operational subs will be available to replace the vital Ohio-class subs as they leave operational service, the Navy maintains. Research and development costs for the new program are starting to accrue today; detailed design is slated to start in FY-15.

The Navy plans to buy the first sub in FY-19, the second in FY-22 and one annually from FY-24 to FY-33. Any delay in construction will hurt the Navy's ability to meet the sea-based strategic deterrent operational requirements established by U.S. Strategic Command, the service maintains. The new subs must be mission capable starting in FY-29 before the inventory of Ohio-class subs can drop below 12, according to the draft plan.

"There is no leeway in this plan to allow a later start or any delay in the procurement plan," the Navy writes.

The SSBN(X) procurements will be concurrent with the wholesale end-of-service-life retirements of Los Angeles-class attack subs, Ticonderoga-class cruisers, Arleigh Burke-class destroyers and LSD-41/49 dock landing ships. As the Navy buys the new subs, only four or five other major ships could be built per year, according to the draft plan, which notes this slowdown in procurement will occur when the Navy needs to be buying at least nine to 10 ships annually to maintain its force level.

The Navy anticipates the slowdown will shrink the size of its fleet. The large surface combatant force will drop to 43 ships fewer than the 96-ship target force level, while the attack sub inventory will drop to a low of 38 boats and the amphibious force will drop to 26 ships—seven fewer than the 33 required, according to the draft.

By FY-40, the battleforce inventory will drop to 237 ships, 87 vessels short of the draft plan's stated goal of 324 ships. And considering the change in force composition with 20 percent of these numbers being Littoral Combat Ships and Joint High Speed Vessels, the fleet of FY-40 will have "less warfighting capability," the service writes. It will take decades to reach the 324-ship level, the Navy maintains.

"The effect on the industrial base will likely be the loss of certain shipbuilders, combat system companies and suppliers," the draft states. Procurement schedules for guided missile destroyers, attack submarines, amphibious ships and other combatants will be disrupted with reduced procurements and years of production gaps that will hurt the shipbuilding and combat systems industrial bases, the Navy warns.

During the years of SSBN(X) procurement, attack submarine and guided missile destroyer procurements will decrease to one per year and numerous other ship classes—including new maritime prepositioning ships, new command vessels and submarine tenders—will not be built or recapitalized. This is primarily in a 14-year period from FY-19 to FY-33.

But the plan holds out the possibility Washington might ultimately provide the Navy additional funding for the program, reducing the impact on industry and boosting the FY-40 fleet size. If the Navy were to receive an extra \$80 billion to cover the cost of the subs over the 14-year period in question, the service could buy 44 additional ships over the 30-year plan, according to the draft: 19 DDG-51 destroyers, 15 Littoral Combat Ships, four attack subs, two LPD-17 amphibious ships, one LH(X) amphibious ship, seven T-AO oilers, two

sub tenders and six Joint High Speed Vessels. This would boost the FY-40 fleet size to 279 ships, with “fewer shortfalls in critical areas,” the Navy maintains.

The Navy previously called for 14 new ballistic missile subs but now says only 12 are needed. The cost estimate of approximately \$80 billion assumes the SSBN(X) unit cost to be roughly \$6 billion to \$7 billion, consistent with the cost of an Ohio-class sub escalated to FY-09 dollars, the report states. Hence, the SSBN(X) project could cost at least \$72 billion to \$84 billion, according to the draft.

The previous report predicted a fleet of over 300 ships from FY-17 onward, with 322 in FY-38. But the new plan would sustain a fleet of 279 on average, rather than the new goal of 324. (The previous goal was 313.) It says the fleet will have 284 ships in FY-11, rise to 312 in FY-21 and drop to 237 by FY-40.<sup>23</sup>

A December 7, 2009, press report stated:

Since 2006, the Navy has argued it needs a force structure of 313 ships, but that oft-cited figure is going up to 324 as the service aims to bolster missile defense and irregular warfare capabilities, according to a draft of the service’s latest long-term shipbuilding report.

Inside the Navy reviewed a copy of the report, which is labeled “for official use only—pre-decisional information—not for release outside the Navy.” The final version is due to Congress in February.

“Compared to the Navy’s previous [313-ship] requirement … the Navy’s future fleet must evolve to provide increased capacity for ballistic missile defense and provide more balance with forces better suited for building partner capacity and conducting irregular warfare,” the report states.

The goal does not mean the Navy plans to achieve a force structure of 324 ships. In fact, over the next 30 years, the Navy does not even expect the fleet to rise to 313 ships, let alone 324, according to the report. But the new figure signals the Navy has raised the marker of what it considers the minimum force needed “to fulfill all the Navy’s essential missions at the most prudent level of risk.”

The 324-ship goal reflects “the mission-driven requirements” based on threat projections for fiscal years 2020 to 2024 and “will be the target force level from which fiscally constrained, higher-risk excursions will depart,” according to the draft report.

The new goal increases the target level for surface combatants from 88 to 96, boosts the level for amphibious warships from 31 to 33 and raises the goal for support ships from 20 to 39.

The 324-ship target drops the requirement for 12 new maritime prepositioning ships as well as four SSGN submarines armed with conventional cruise missiles. The requirement for 14 new ballistic missile subs has been curtailed from 14 to 12.

Like the 313-ship goal, the new approach continues to call for 11 aircraft carriers, 55 Littoral Combat Ships, 48 attack submarines and 30 combat logistics vessels.

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<sup>23</sup> Christopher J. Castelli, “Navy Confronts \$80 Billion Cost Of New Ballistic Missile Submarines (Updated),” *Inside the Pentagon*, December 3, 2009. The online version of this story, shown here, includes an editor’s note stating: “This story has been updated to include the Navy’s rough estimate for the SSBN(X) unit cost.”

The shipbuilding plan for FY-11 to FY-15 is based on the premise the service will receive about \$13 billion annually for shipbuilding. It calls for buying 46 ships over those years: eight in FY-11, nine in FY-12, 10 in FY-13, nine in FY-14 and 10 in FY-15.

In FY-11, the plan includes \$13.5 billion for two DDG-51 destroyers, two LCSs, two Virginia-class attack subs, one big-deck amphibious ship and one Joint High Speed Vessel.

Though the long-term plan guts previous plans for Maritime Prepositioning Force (Future) ships, it includes one last vestige of the effort: \$330 million for a Joint Logistics Vessel (JLV) in FY-12, which is described as a low-cost float-on/float-off ship that will be a prototype for functions once tied to the MPF(F) Mobile Landing Platform. The MPF(F) concept is “valid but not currently within the Navy’s fiscal reach,” the report states.

Among other ships, the plan includes one LPD-17 amphibious vessel in FY-12 and nine Virginia-class subs (two per year from FY-11 to FY-14 and one in FY-15).<sup>24</sup>

The above article also included what were described as six tables from the draft report on the FY2011 30-year shipbuilding plan. Those tables are reproduced below.

**Table 1. Naval Battleforce Target Force Level**

Type/Class	FY-09	FY-11
Aircraft Carriers	11	11
Surface Combatants	88	96
Littoral Combatants	55	55
Attack Submarines	48	48
Guided Missile Submarines	4	0
Ballistic Missile Submarines	14	12
Amphibious Warfare Ships	31	33
Maritime Prepositioning Force (Future)	12	0
Combat Logistics Force Ships	30	30
Support Ships	20	39
Total Battleforce Level	313	324

<sup>24</sup> Christopher J. Castelli, “Navy Raises 313-Ship Goal To 324, Boosts Focus on Missile Defense,” *Inside the Navy*, December 7, 2009.

<b>Table 2. FY 2011-2015 Shipbuilding Procurement and Funding Plan</b>													
Ship Type	(\$M)	FY2011		FY2012		FY2013		FY2014		FY2015		Total	
		\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty
CVN 78 <sup>1</sup>		2,655		498		2,496	1	3,155		2,534		11,339	1
DDG 51		3,240	2	2,186	1	3,440	2	2,077	1	3,836	2	14,779	8
LCS <sup>2</sup>		1,150	2	1,190	2	1,848	3	2,550	4	2,640	4	9,378	15
SSN 774		5,144	2	4,626	2	4,282	2	5,756	2	4,465	1	24,272	9
SSBN(X) <sup>3</sup>										963		963	
LPD 17				1,869	1							1,869	1
LHA(R)		1,085	1			2,085						3,170	1
JLV <sup>4</sup>		50		330	1							380	1
T-ATF(X)										59	1	59	1
JHSV <sup>5</sup>		181	1	375	2	381	2	393	2	403	2	1,732	9
<b>Total New Construction</b>		<b>13,505</b>	<b>8</b>	<b>13,159</b>	<b>9</b>	<b>12,446</b>	<b>10</b>	<b>13,932</b>	<b>9</b>	<b>14,900</b>	<b>10</b>	<b>67,941</b>	<b>46</b>

**Notes:**

1. Funding for the CVN 78 program reflects Congressional authorization to incrementally fund nuclear aircraft carrier procurements over a four-year period.
2. Funding does not include LCS mission modules, which are funded in Other Procurement, Navy (OPN).
3. Detail Design funding.
4. Funded in National Defense Sealift Fund (NDSF).
5. The JHSV program is a joint Army and Navy program. Quantities shown reflect Navy procurements only.

**Table 3. FY-11 to FY-40 Long-Range Naval Vessel Construction Plan**

Fiscal Year	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
Aircraft Carriers			1					1				1						1				1					1					
Surface Combatants	2	1	2	1	2	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2		
Littoral Combat Ships	2	2	3	4	4	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Attack Submarines	2	2	2	2	1	2	2	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	
Ballistic Missile Subs								1			1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Amphibious Warfare Ships	1	1			1	1		1		2			1		1	1		1	1		1	1	1	1	1	1	1	1	1	1	1	1
Combat Logistics Force	1							1		1		1		1		1		1		1		1		1		1		1		1		
Support Vessels	1	2	2	2	3	2	3	3	2	3	1	3	3	2							1	1	1	1	1	1	1	1	1	1	1	
<b>Total New Construction</b>	8	9	10	9	10	9	11	9	8	8	6	11	7	7	5	5	5	7	4	6	6	7	7	7	6	7	7	8	6	7		

**Table 4. FY-11 to FY-40 Naval Battle Force Inventory**

Fiscal Year	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
Aircraft Carriers	11	11	10	10	11	11	11	11	11	12	12	12	11	11	12	12	12	11	11	12	12	11	11	11	12	11	11	11	11			
Surface Combatants	110	107	102	96	91	93	92	94	94	96	96	95	94	93	91	88	86	83	79	75	70	67	65	62	61	60	57	56	54	53		
Littoral Combat Ships	2	4	7	9	11	14	18	22	25	28	30	31	32	33	34	35	36	37	38	39	40	41	41	42	42	43	42	40	39	38		
Attack Submarines	53	54	55	55	54	51	51	50	51	49	48	47	47	45	44	43	42	40	39	38	40	40	41	42	43	44	45	44	44	44		
Cruise Missile Subs	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	1													
Ballistic Missile Subs	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	13	13	13	12	12	12	12	12	12	12	12	12		
Amphibious Warfare Ships	29	30	30	31	33	33	33	33	33	33	35	35	36	36	35	35	34	35	34	32	31	31	30	30	28	27	27	26	26	27		
Combat Logistics Force	30	32	32	34	34	34	34	34	34	34	34	33	32	32	31	31	28	28	26	26	24	25	25	25	23	24	24	24	24	25		
Mine Warfare Ships	14	14	14	14	14	14	13	13	11	10	7	6	2	1																		
Support Vessels	17	17	19	20	22	24	27	29	30	31	32	33	36	37	36	36	37	37	36	35	34	34	33	33	32	31	30	29	28	27		
<b>Total Force Inventory</b>	284	287	287	286	286	292	297	304	307	311	312	310	308	306	301	296	289	284	276	269	263	261	258	257	253	252	248	242	238	237		

**Table 5. FY-11 to FY-40 Alternative Construction Plan**

Fiscal Year	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
Aircraft Carriers			1					1				1						1				1					1					
Surface Combatants	2	1	2	1	2	1	2	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	2	2	2	2			
Littoral Combat Ships	2	2	3	4	4	3	3	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2			
Attack Submarines	2	2	2	2	1	2	2	1	2	2	2	2	2	1	2	1	2	2	1	2	1	1	1	1	1	2	1	2	1	2		
Ballistic Missile Subs								1			1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Amphibious Warfare Ships	1	1			1	1		1	2		1		1	1	1	1	1	1	1	1	1	1	1	1	1	2		1	2			
Combat Logistics Force	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Support Vessels	1	2	2	2	3	2	3	3	2	2	3	2		2	3	2	1				2	2	2	2	2	2	2	2	2	2	2	
<b>Total New Construction</b>	8	9	10	9	10	9	11	9	12	8	9	10	11	10	9	9	9	8	10	9	9	9	10	9	12	8	9	8	10	5		

**Table 6. FY-11 to FY-40 Alternative Naval Battle Force Inventory\***

Fiscal Year	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
Aircraft Carriers	11	11	10	10	11	11	11	11	11	12	12	12	11	11	12	12	12	11	11	12	12	11	11	11	12	11	11	11	11			
Surface Combatants	110	107	101	96	91	93	92	94	94	96	96	95	94	94	92	89	88	86	83	80	76	74	73	72	73	74	73	72	72			
Littoral Combat Ships	2	4	7	9	11	14	18	22	25	28	30	32	34	36	38	40	42	44	46	48	50	52	51	51	51	50	50	50	50			
Attack Submarines	53	54	55	55	54	51	51	50	51	49	48	47	47	45	44	43	42	40	39	39	41	42	44	45	47	48	49	48	48			
Cruise Missile Subs	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	1													
Ballistic Missile Subs	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	13	13	13	12	12	12	12	12	12	12	12	12			
Amphibious Warfare Ships	29	30	30	31	33	33	33	33	33	33	35	35	36	36	36	35	36	36	35	33	34	32	32	31	30	30	28	29	30			
Combat Logistics Force	30	32	32	34	34	34	34	34	34	34	34	33	33	33	33	33	31	31	30	30	29	30	31	31	30	31	32	33	34			
Mine Warfare Ships	14	14	14	14	14	14	13	13	11	10	7	6	2	1																		
Support Vessels	17	17	19	20	22	24	27	29	30	31	32	34	36	36	34	33	34	34	34	33	33	33	33	34	34	34	34	34	34	34		
<b>Total Force Inventory</b>	284	287	286	286	292	297	304	307	311	312	310	307	301	299	294	289	286	284	282	282	283	283	283	278	278	279	279	279	279			
	295	291	288	287	286	287	286	287	288	290	291	292	288	289	291																	

\*Editor's Note: In the draft report's version of Table 6 the ships do not add up to the totals given for FY-28 to FY-40. For those years, we have calculated the totals and included them in italics beneath the chart.

## Appendix B. Adequacy of Planned 313-Ship Fleet

### Specific Ship Categories

#### Amphibious Ships

Some observers have questioned whether the Navy's proposed total of 31 amphibious ships within the 313-ship fleet will be sufficient. The Marine Corps has stated that a total of 33, including 11 San Antonio (LPD-17) class ships, would be needed to meet the Marine Corps' requirement for having a force capable of lifting the assault echelons of 2.0 Marine Expeditionary Brigades (MEBs). The issue is discussed in more detail in another CRS report.<sup>25</sup>

#### Attack Submarines

Some observers have questioned whether the Navy's proposed total of 48 attack submarines within the 313-ship plan will be sufficient, and have suggested that a total of 55 or more would be more appropriate, particularly in light of requests for forward-deployed attack submarines from U.S. regional military commanders, and the modernization of China's naval forces, including its submarine force. The issue is discussed in more detail other CRS reports.<sup>26</sup>

#### Aircraft Carriers

Some observers have questioned whether the Navy's proposed total of 11 aircraft carriers through FY2018 will be sufficient, particularly in light of past Navy plans that have called for 12 carriers, the Navy's testimony in 2007 that the 313-ship proposal includes a requirement for an eventual total of 12 carriers, and Navy plans to increase the carrier force back to 12 ships in 2019 and maintain it at that level thereafter. The latter two points, they argue, suggest that the Navy would actually prefer to have 12 carriers between now and FY2019, rather than 11.

Observers have expressed concern that the current carrier force of 11 ships will temporarily decline further, to 10 ships, during the 33-month period between the scheduled retirement of the carrier Enterprise (CVN-65) in November 2012 and scheduled the entry into service of its replacement, the carrier Gerald R. Ford (CVN-78), in September 2015. Even if an 11-carrier force is adequate, these observers argue, a 10-carrier force might not be, even if only for a 33-month period.

10 USC §5062 requires the Navy to maintain an aircraft carrier force of at least 11 operational ships. The Navy for FY2009 is requesting a legislative waiver from Congress that would permit the Navy to reduce the carrier force to 10 operational ships for the 33-month between the retirement of the Enterprise and the entry into service of the Ford. The Navy made the same request as part of its FY2008 budget submission; Congress did not act on the request in FY2008.

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<sup>25</sup> CRS Report RL32513, *Navy-Marine Corps Amphibious and Maritime Prepositioning Ship Programs: Background and Oversight Issues for Congress*, by Ronald O'Rourke.

<sup>26</sup> CRS Report RL32418, *Navy Attack Submarine Procurement: Background and Issues for Congress*, by Ronald O'Rourke; and CRS Report RL33153, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, by Ronald O'Rourke.

## Overall Number of Ships

Some observers have questioned whether the overall planned total of 313 ships would be adequate, particularly in light of Navy plans in recent decades for larger total numbers of ships.

One possible method for assessing the appropriateness of the total number of ships being proposed by the Navy is to compare that number to historical figures for total fleet size. Historical figures for total fleet size, however, might not be a reliable yardstick for assessing the appropriateness of the Navy's proposed 313-ship fleet, particularly if the historical figures are more than a few years old, because the missions to be performed by the Navy, the mix of ships that make up the Navy, and the technologies that are available to Navy ships for performing missions all change over time.

The Navy, for example, reached a late-Cold War peak of 568 battle force ships at the end of FY1987,<sup>27</sup> and as of June 5, 2008, had declined to a total of 280 battle force ships. The FY1987 fleet, however, was intended to meet a set of mission requirements that focused on countering Soviet naval forces at sea during a potential multi-theater NATO-Warsaw Pact conflict, while the June 2008 fleet is intended to meet a considerably different set of mission requirements centered on influencing events ashore by countering both land- and sea-based military forces of potential regional threats other than Russia, including non-state terrorist organizations. In addition, the Navy of FY1987 differed substantially from the June 2008 fleet in areas such as profusion of precision-guided air-delivered weapons, numbers of Tomahawk-capable ships, and sophistication of C4ISR systems.<sup>28</sup>

In coming years, Navy missions may shift again, to include, as a possible example, a greater emphasis on being able to counter improved Chinese maritime military capabilities.<sup>29</sup> In addition, the capabilities of Navy ships will likely have changed further by that time due to developments such as more comprehensive implementation of networking technology and increased use of ship-based unmanned vehicles.

The 568-ship fleet of FY1987 may or may not have been capable of performing its stated missions; the 280-ship fleet of June 2008 may or nor may not have been capable of performing its stated missions; and a fleet years from now with a certain number of ships may or may not be capable of performing its stated missions. Given changes over time in mission requirements, ship mixes, and technologies, however, these three issues are to a substantial degree independent of one another.

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<sup>27</sup> Some publications, such as those of the American Shipbuilding Association, have stated that the Navy reached a peak of 594 ships at the end of FY1987. This figure, however, is the total number of active ships in the fleet, which is not the same as the total number of battle force ships. The battle force ships figure is the number used in government discussions of the size of the Navy. In recent years, the total number of active ships has been larger than the total number of battle force ships. For example, the Naval Historical Center states that as of November 16, 2001, the Navy included a total of 337 active ships, while the Navy states that as of November 19, 2001, the Navy included a total of 317 battle force ships. Comparing the total number of active ships in one year to the total number of battle force ships in another year is thus an apple-to-oranges comparison that in this case overstates the decline since FY1987 in the number of ships in the Navy. As a general rule to avoid potential statistical distortions, comparisons of the number of ships in the Navy over time should use, whenever possible, a single counting method.

<sup>28</sup> C4ISR stands for command and control, communications, computers, intelligence, surveillance, and reconnaissance.

<sup>29</sup> For a discussion, see CRS Report RL33153, *China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, by Ronald O'Rourke.

For similar reasons, trends over time in the total number of ships in the Navy are not necessarily a reliable indicator of the direction of change in the fleet's ability to perform its stated missions. An increasing number of ships in the fleet might not necessarily mean that the fleet's ability to perform its stated missions is increasing, because the fleet's mission requirements might be increasing more rapidly than ship numbers and average ship capability. Similarly, a decreasing number of ships in the fleet might not necessarily mean that the fleet's ability to perform stated missions is decreasing, because the fleet's mission requirements might be declining more rapidly than numbers of ships, or because average ship capability and the percentage of time that ships are in deployed locations might be increasing quickly enough to more than offset reductions in total ship numbers.

Previous Navy force structure plans, such as those shown in **Table 1**, might provide some insight into the potential adequacy of a proposed new force-structure plan, but changes over time in mission requirements, technologies available to ships for performing missions, and other force-planning factors suggest that some caution should be applied in using past force structure plans for this purpose, particularly if those past force structure plans are more than a few years old. The Reagan-era plan for a 600-ship Navy, for example, was designed for a Cold War set of missions focusing on countering Soviet naval forces at sea, which is not an appropriate basis for planning the Navy today.<sup>30</sup>

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<sup>30</sup> Navy force structure plans that predate those shown in **Table 1** include the Reagan-era 600-ship plan of the 1980s, the Base Force fleet of more than 400 ships planned during the final two years of the George H. W. Bush Administration, the 346-ship fleet from the Clinton Administration's 1993 Bottom-Up Review (or BUR, sometimes also called Base Force II), and the 310-ship fleet of the Clinton Administration's 1997 QDR. The table below summarizes some key features of these plans.

**Features of Recent Navy Force Structure Plans**

Plan	600-ship	Base Force	1993 BUR	1997 QDR
<b>Total ships</b>	~600	~450/416 <sup>a</sup>	346	~305/310 <sup>b</sup>
<b>Attack submarines</b>	100	80/~55 <sup>c</sup>	45-55	50/55 <sup>d</sup>
<b>Aircraft carriers</b>	15 <sup>e</sup>	12	11+1 <sup>f</sup>	11+1 <sup>f</sup>
<b>Surface combatants</b>	242/228 <sup>g</sup>	~150	~124	116
<b>Amphibious ships</b>	~75 <sup>h</sup>	51 <sup>i</sup>	36 <sup>i</sup>	36 <sup>i</sup>

**Source:** Prepared by CRS based on DOD and U.S. Navy data.

- a. Commonly referred to as 450-ship plan, but called for decreasing to 416 ships by end of FY1999.
- b. Original total of about 305 ships was increased to about 310 due to increase in number of attack submarines to 55 from 50.
- c. Plan originally included 80 attack submarines, but this was later reduced to about 55.
- d. Plan originally included 50 attack submarines but this was later increased to 55.
- e. Plus one additional aircraft carrier in the service life extension program (SLEP).
- f. Eleven active carriers plus one operational reserve carrier.
- g. Plan originally included 242 surface combatants but this was later reduced to 228.
- h. Number needed to lift assault echelons of one Marine Expeditionary Force (MEF) plus one Marine Expeditionary Brigade (MEB).
- i. Number needed to lift assault echelons of 2.5 MEBs. Note how number needed to meet this goal changed from Base Force plan to the BUR plan—a result of new, larger amphibious ship designs.

## Appendix C. Size of the Navy and Navy Shipbuilding Rate

### Size of the Navy

**Table C-1** shows the size of the Navy in terms of total number of ships since FY1948; the numbers shown in the table reflect changes over time in the rules specifying which ships count toward the total. Differing counting rules result in differing totals, and for certain years, figures reflecting more than one set of counting rules are available. Figures in the table for FY1978 and subsequent years reflect the battle force ships counting method, which is the set of counting rules established in the early 1980s for public policy discussions of the size of the Navy.

As shown in the table, the total number of battle force ships in the Navy reached a late-Cold War peak of 568 at the end of FY1987 and began declining thereafter.<sup>31</sup> The Navy fell below 300 battle force ships in August 2003 and included 280 battle force ships as of June 5, 2008.

As discussed in **Appendix B**, historical figures for total fleet size might not be a reliable yardstick for assessing the appropriateness of the Navy's proposed 313-ship fleet, particularly if the historical figures are more than a few years old, because the missions to be performed by the Navy, the mix of ships that make up the Navy, and the technologies that are available to Navy ships for performing missions all change over time. For similar reasons, trends over time in the total number of ships in the Navy are not necessarily a reliable indicator of the direction of change in the fleet's ability to perform its stated missions. An increasing number of ships in the fleet might not necessarily mean that the fleet's ability to perform its stated missions is increasing, because the fleet's mission requirements might be increasing more rapidly than ship numbers and average ship capability. Similarly, a decreasing number of ships in the fleet might not necessarily mean that the fleet's ability to perform stated missions is decreasing, because the fleet's mission requirements might be declining more rapidly than numbers of ships, or because average ship capability and the percentage of time that ships are in deployed locations might be increasing quickly enough to more than offset reductions in total ship numbers.

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<sup>31</sup> Some publications have stated that the Navy reached a peak of 594 ships at the end of FY1987. This figure, however, is the total number of active ships in the fleet, which is not the same as the total number of battle force ships. The battle force ships figure is the number used in government discussions of the size of the Navy. In recent years, the total number of active ships has been larger than the total number of battle force ships. For example, the Naval Historical Center states that as of November 16, 2001, the Navy included a total of 337 active ships, while the Navy states that as of November 19, 2001, the Navy included a total of 317 battle force ships. Comparing the total number of active ships in one year to the total number of battle force ships in another year is thus an apple-to-oranges comparison that in this case overstates the decline since FY1987 in the number of ships in the Navy. As a general rule to avoid potential statistical distortions, comparisons of the number of ships in the Navy over time should use, whenever possible, a single counting method.

**Table C-1. Total Number of Ships in the Navy Since FY1948**

FY <sup>a</sup>	Number	FY <sup>a</sup>	Number	FY <sup>a</sup>	Number
1948	737	1969	926	1990	547
1949	690	1970	769	1991	526
1950	634	1971	702	1992	466
1951	980	1972	654	1993	435
1952	1,097	1973	584	1994	391
1953	1,122	1974	512	1995	373
1954	1,113	1975	496	1996	356
1955	1,030	1976	476	1997	354
1956	973	1977	464	1998	333
1957	967	1978	468	1999	317
1958	890	1979	471	2000	318
1959	860	1980	477	2001	316
1960	812	1981	490	2002	313
1961	897	1982	513	2003	297
1962	959	1983	514	2004	291
1963	916	1984	524	2005	282
1964	917	1985	541	2006	281
1965	936	1986	556	2007	279
1966	947	1987	568	2008	282
1967	973	1988	565	2009	
1968	976	1989	566	2010	

**Source:** Compiled by CRS using U.S. Navy data. Numbers shown reflect changes over time in the rules specifying which ships count toward the total. Figures for FY1978 and subsequent years reflect the battle force ships counting method, which is the set of counting rules established in the early 1980s for public policy discussions of the size of the Navy.

- a. Data for earlier years may be for the end of the calendar year (or for some other point during the year), rather than for the end of the fiscal year.

## Shipbuilding Rate

**Table C-2** shows past (FY1982-FY2009) and requested (FY2010) rates of Navy ship procurement.

**Table C-2. Battle Force Ships Procured or Requested, FY1982-FY2010**

(Procured FY1982-FY2010; requested FY2010)

82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98
17	14	16	19	20	17	15	19	15	11	11	7	4	4	5	4	5
<b>99</b>	<b>00</b>	<b>01</b>	<b>02</b>	<b>03</b>	<b>04</b>	<b>05</b>	<b>06</b>	<b>07</b>	<b>08</b>	<b>09</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>
5	6	6	6	5	7	8	4 <sup>a</sup>	5 <sup>a</sup>	3 <sup>a</sup>	8	7	n/a	n/a	n/a	n/a	n/a

**Source:** CRS compilation based on examination of defense authorization and appropriation committee and conference reports for each fiscal year. The table excludes non-battle force ships that do not count toward the 313-ship goal, such as certain sealift and prepositioning ships operated by the Military Sealift Command and oceanographic ships operated by agencies such as the National Oceanic and Atmospheric Administration (NOAA).

a. The totals shown for FY2006, FY2007, and FY2008, have been adjusted downward to reflect the cancellation two LCSs funded in FY2006, another two LCSs funded in FY2007, and an LCS funded in FY2008.

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